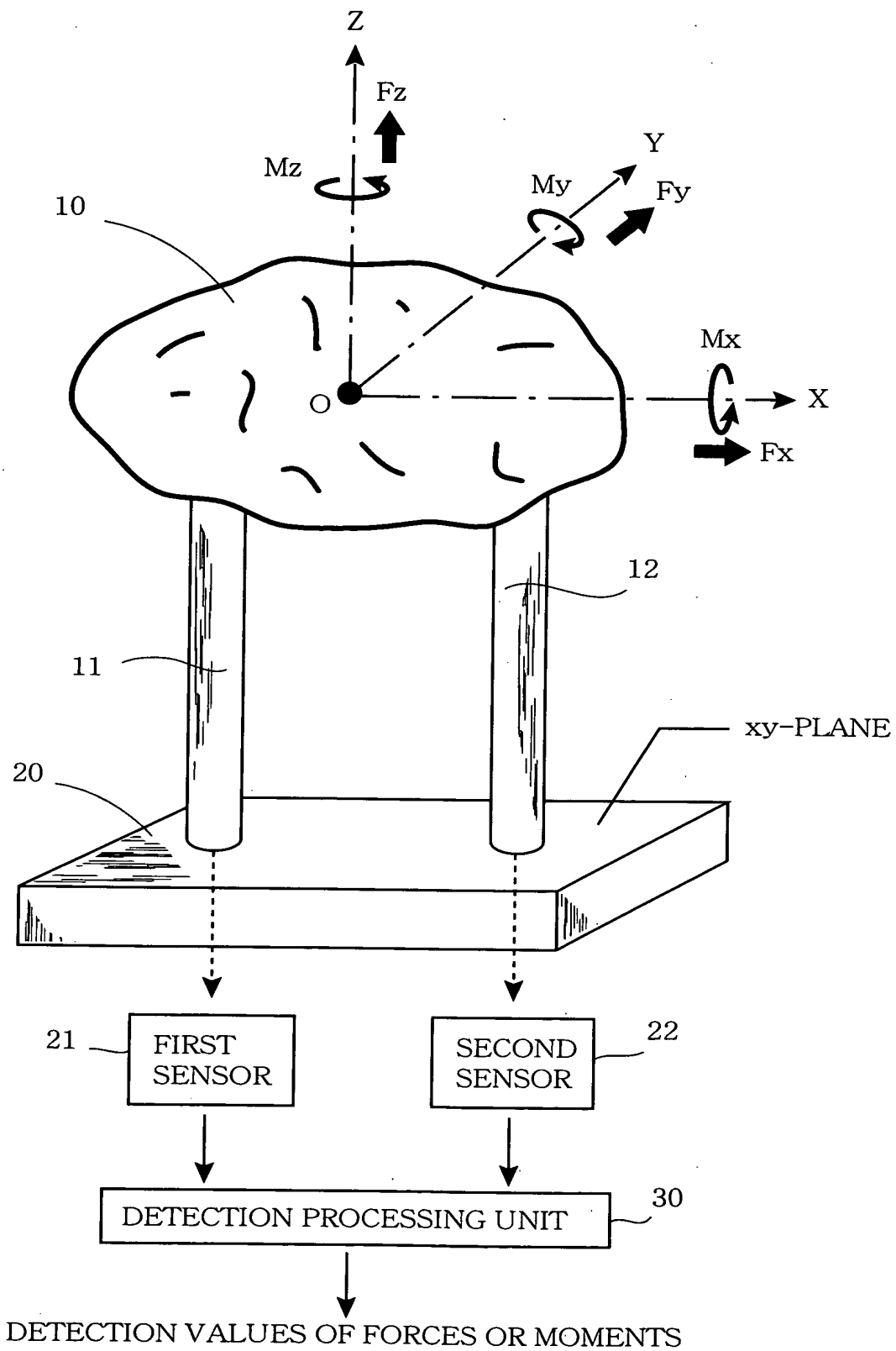


1/34

Fig.1



2/34

Fig.2A

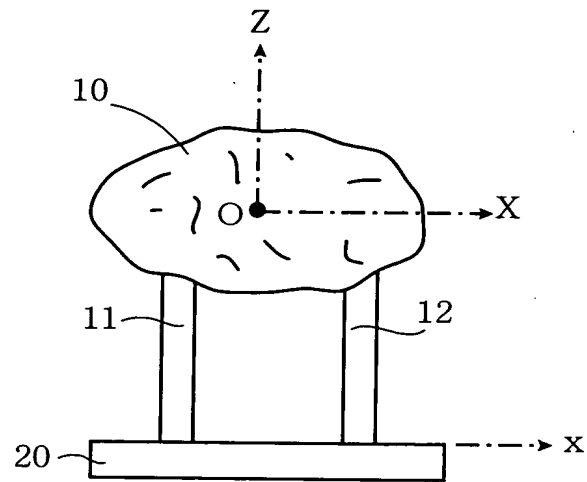


Fig.2B

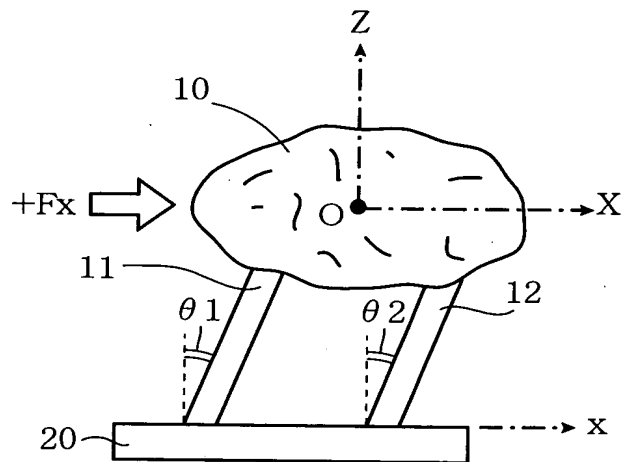
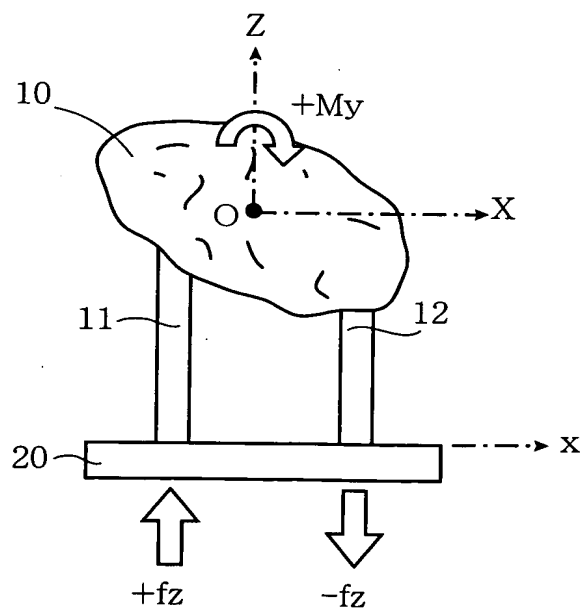


Fig.2C



3/34

Fig.3

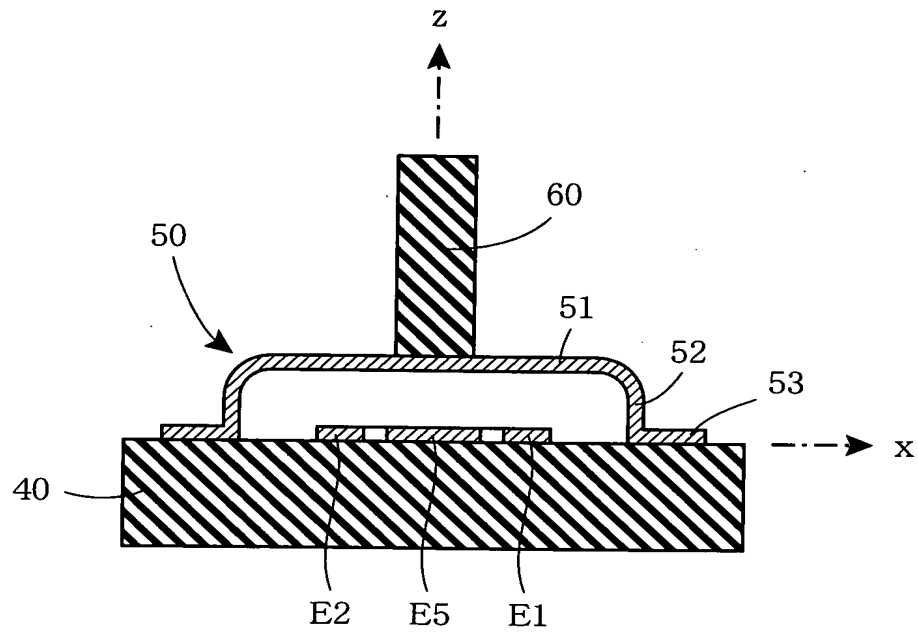
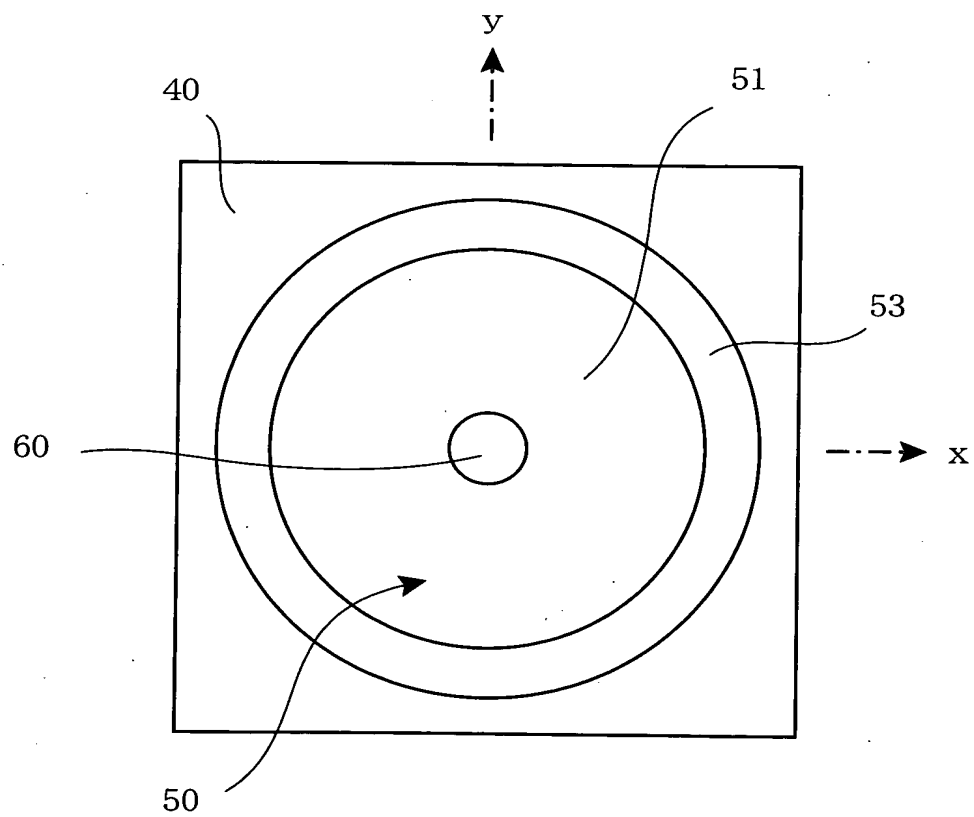


Fig.4



4/34

Fig.5

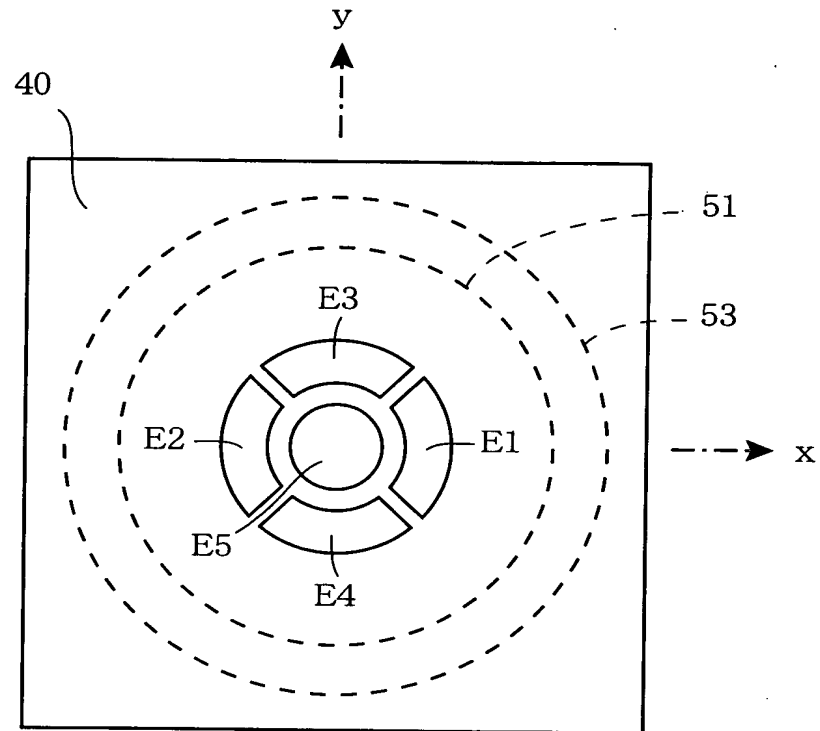
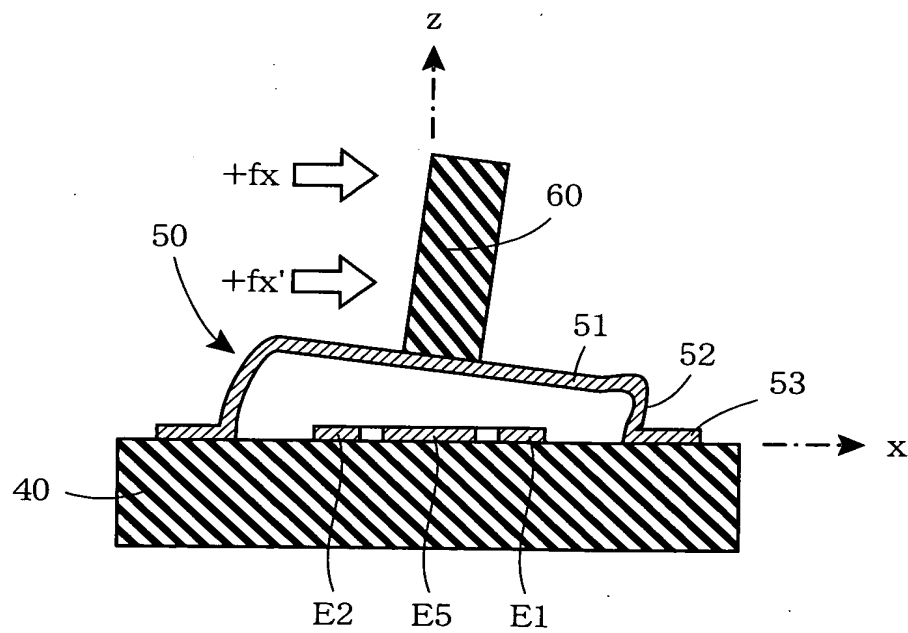


Fig.6



5/34

Fig.7

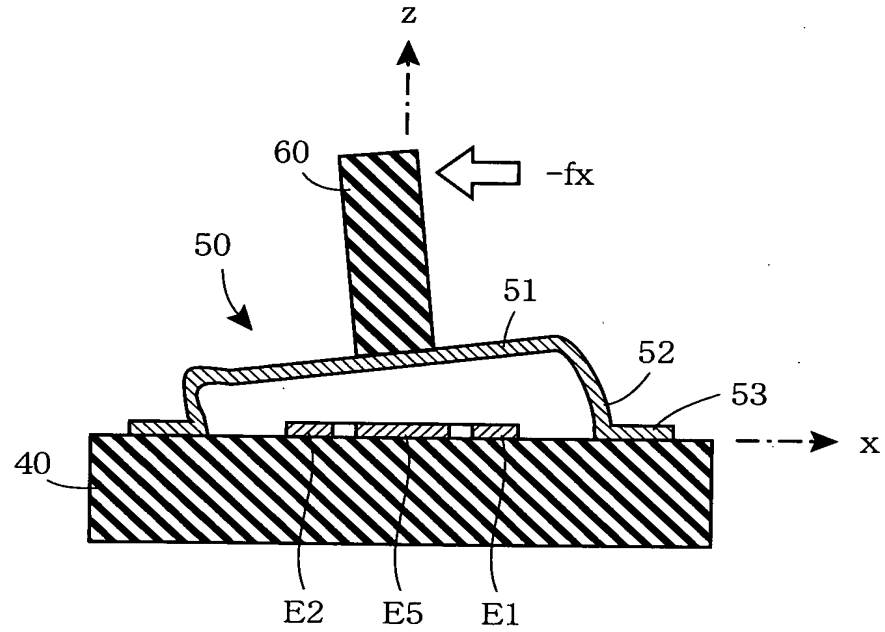
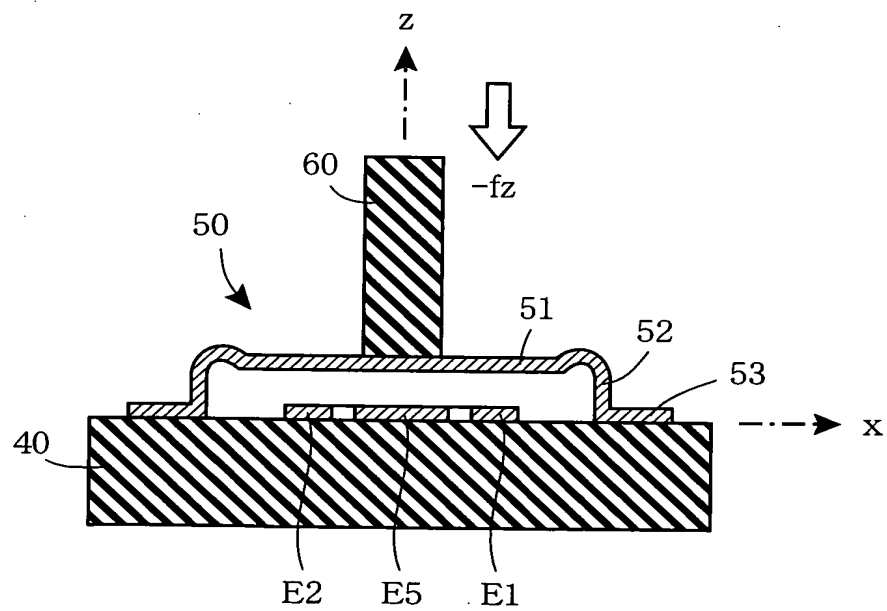


Fig.8



6/34

Fig.9

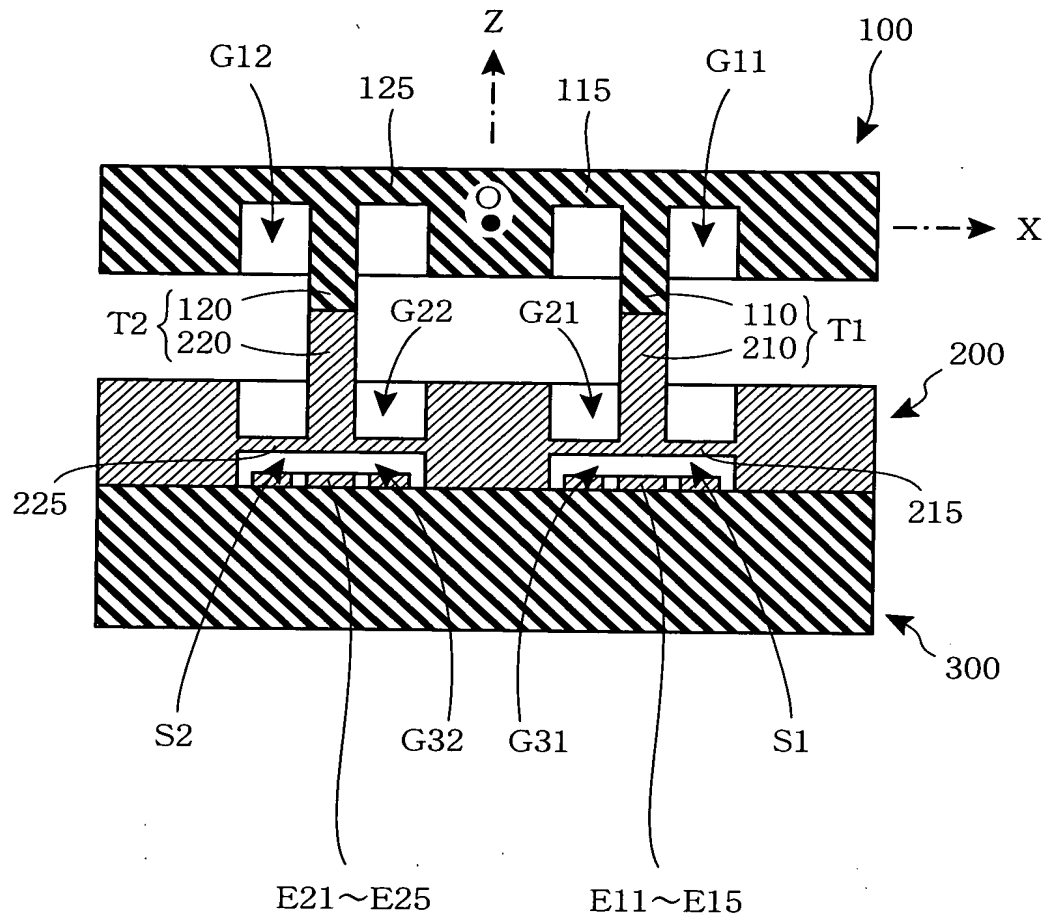
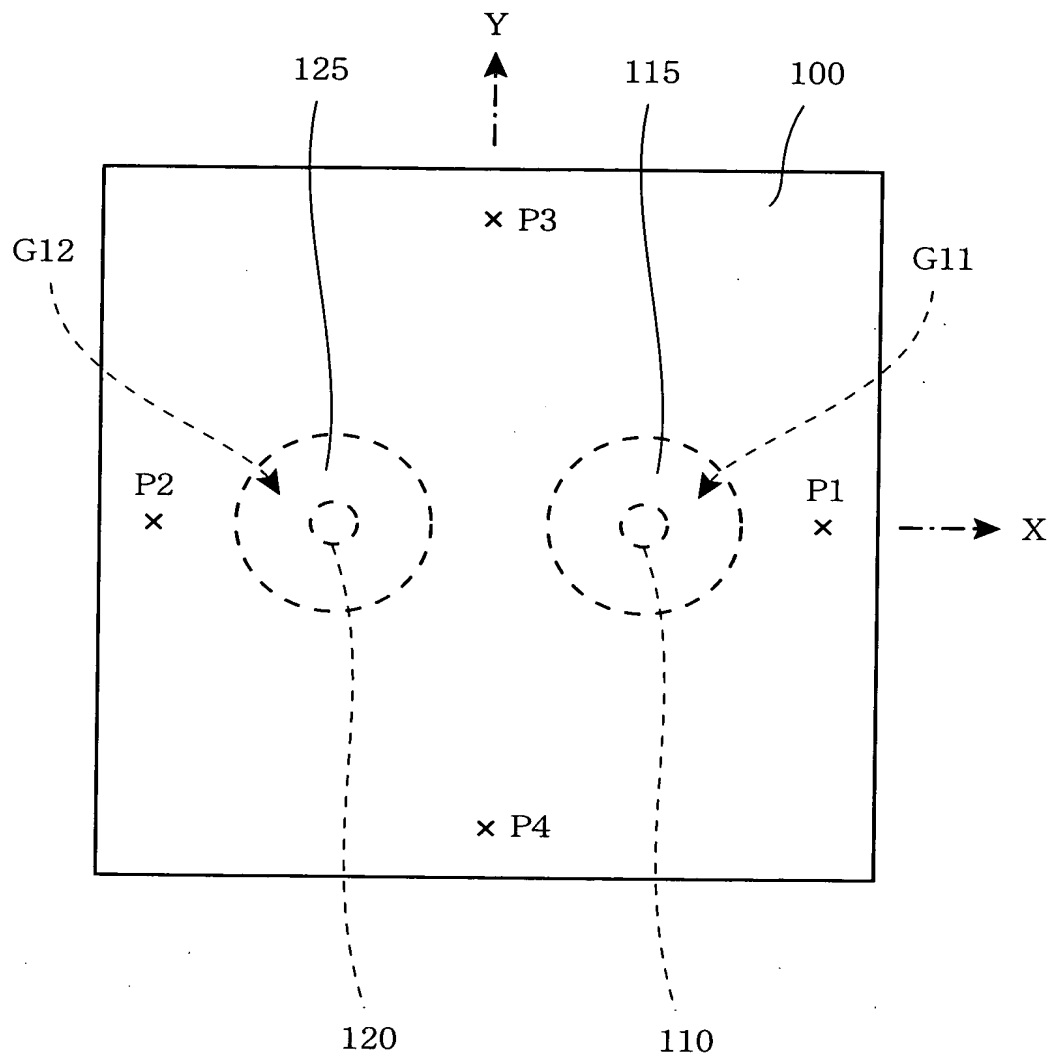
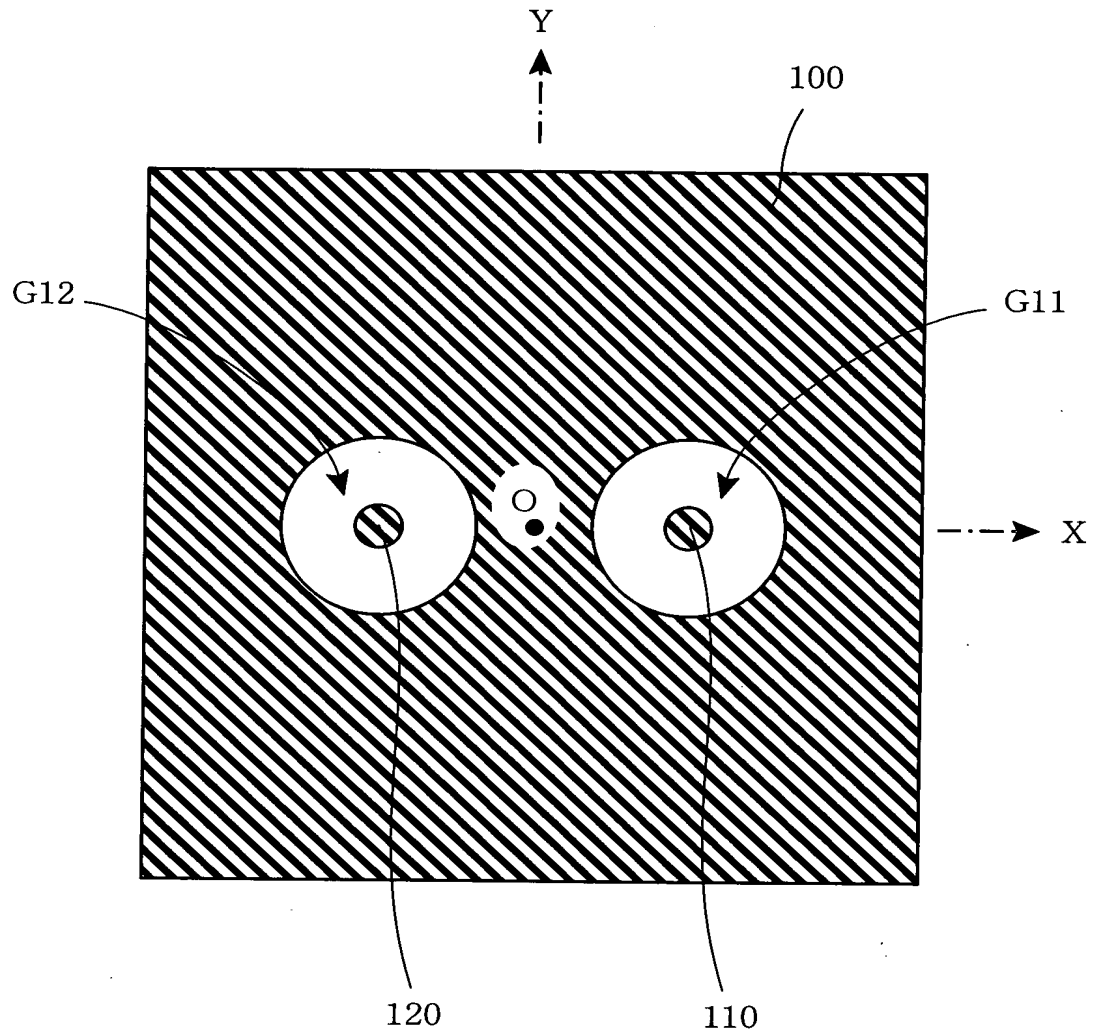


Fig.10



8/34

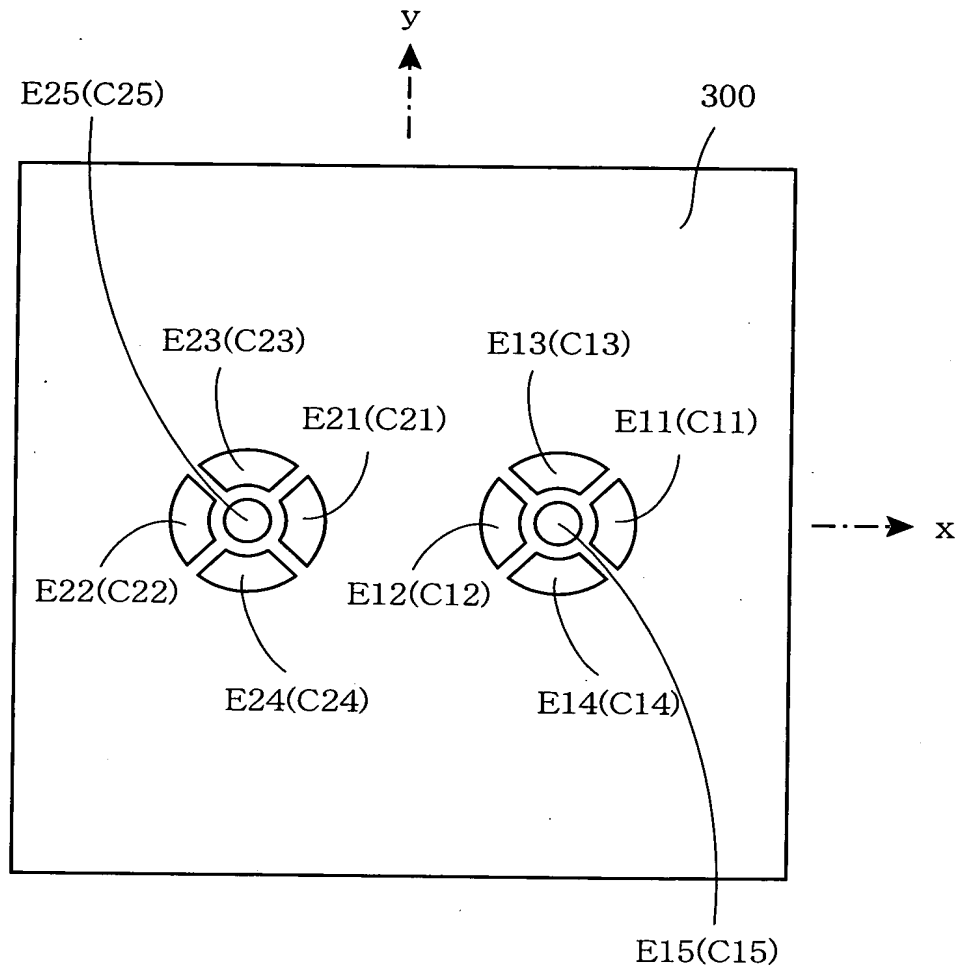
Fig.11





9/34

Fig.12



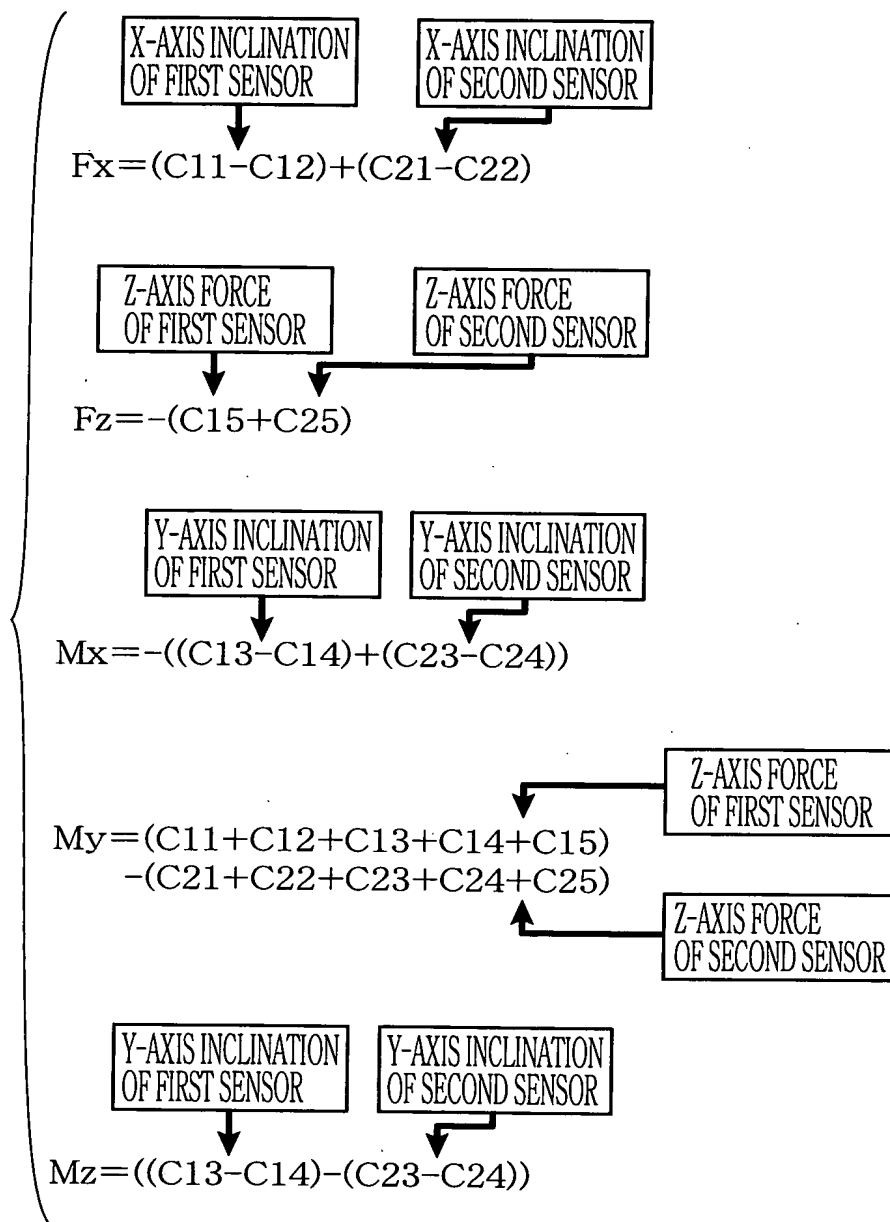
10/34

Fig.13

	C11	C12	C13	C14	C15	C21	C22	C23	C24	C25
+Fx	+	-	0	0	0	+	-	0	0	0
-Fx	-	+	0	0	0	-	+	0	0	0
+Fz	-	-	-	-	-	-	-	-	-	-
-Fz	+	+	+	+	+	+	+	+	+	+
+Mx	0	0	-	+	0	0	0	-	+	0
-Mx	0	0	+	-	0	0	0	+	-	0
+My	+	+	+	+	+	-	-	-	-	-
-My	-	-	-	-	-	+	+	+	+	+
+Mz	0	0	+	-	0	0	0	-	+	0
-Mz	0	0	-	+	0	0	0	+	-	0

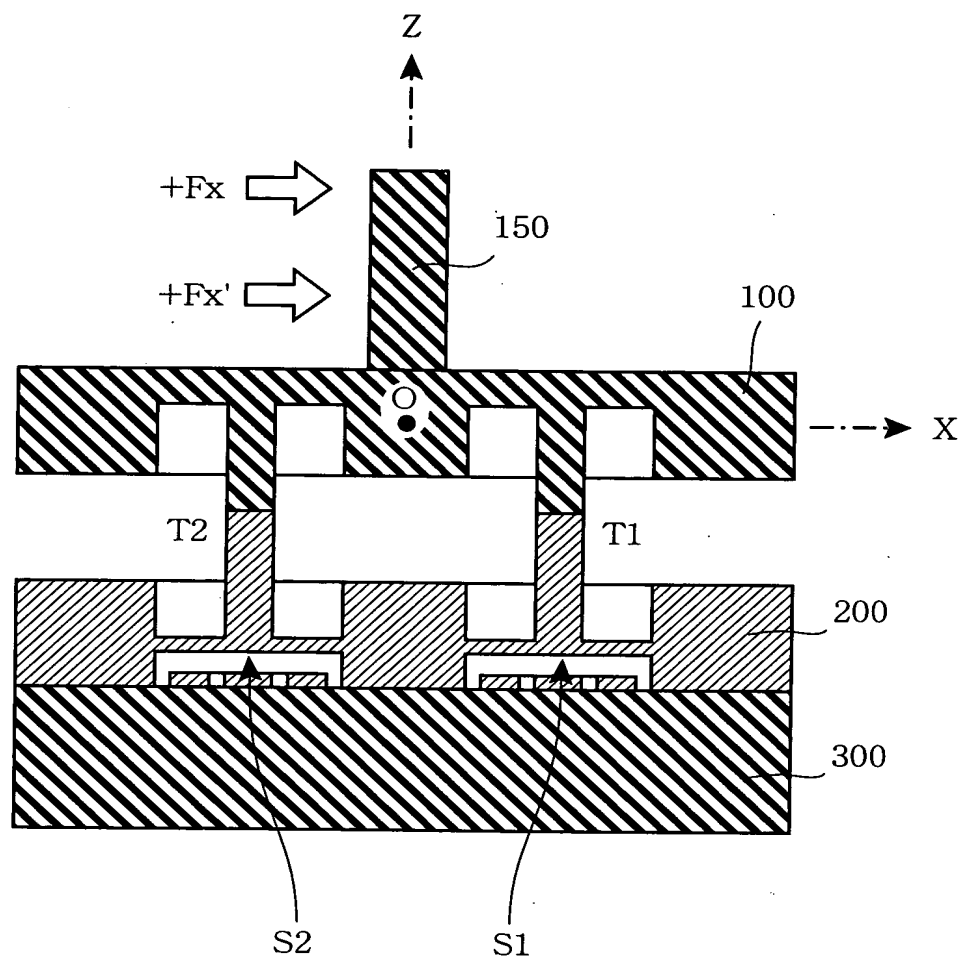
11/34

Fig.14



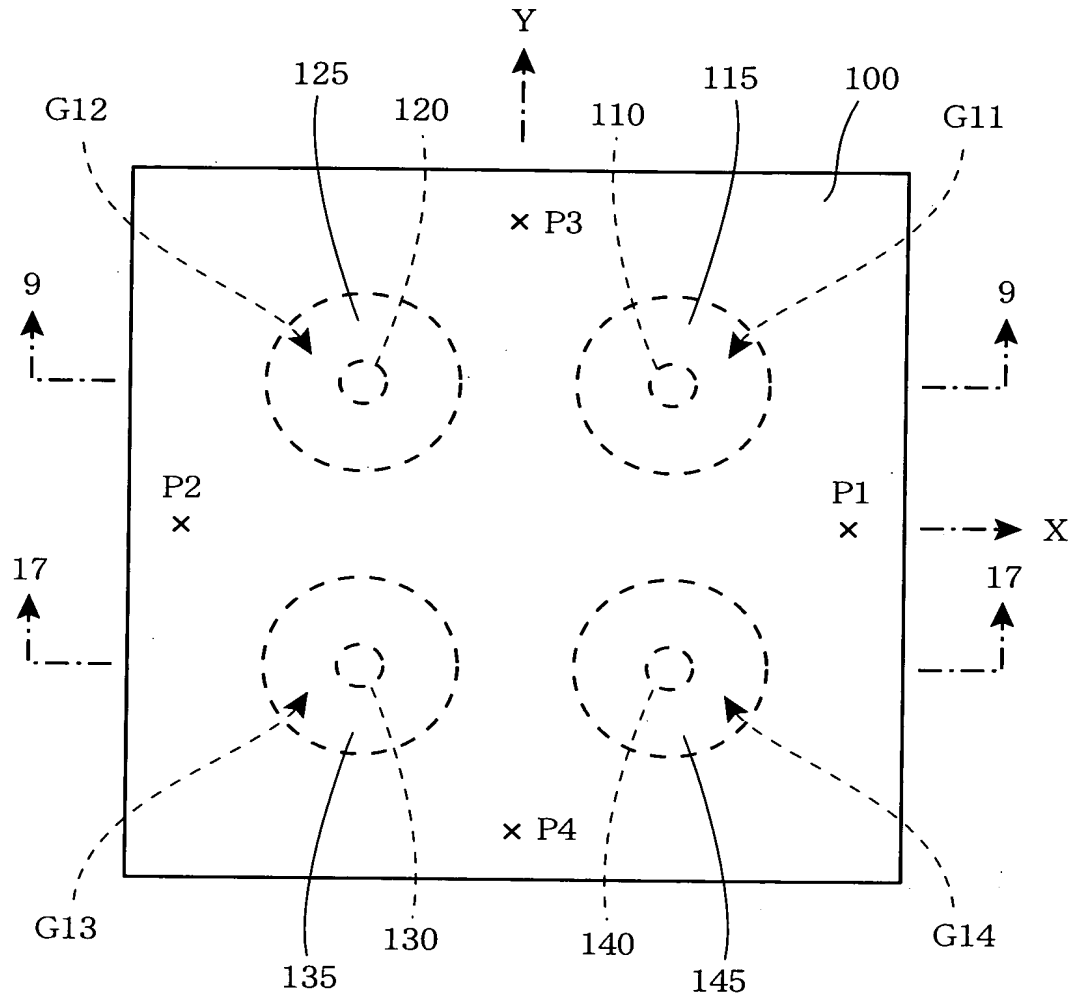
12/34

Fig.15



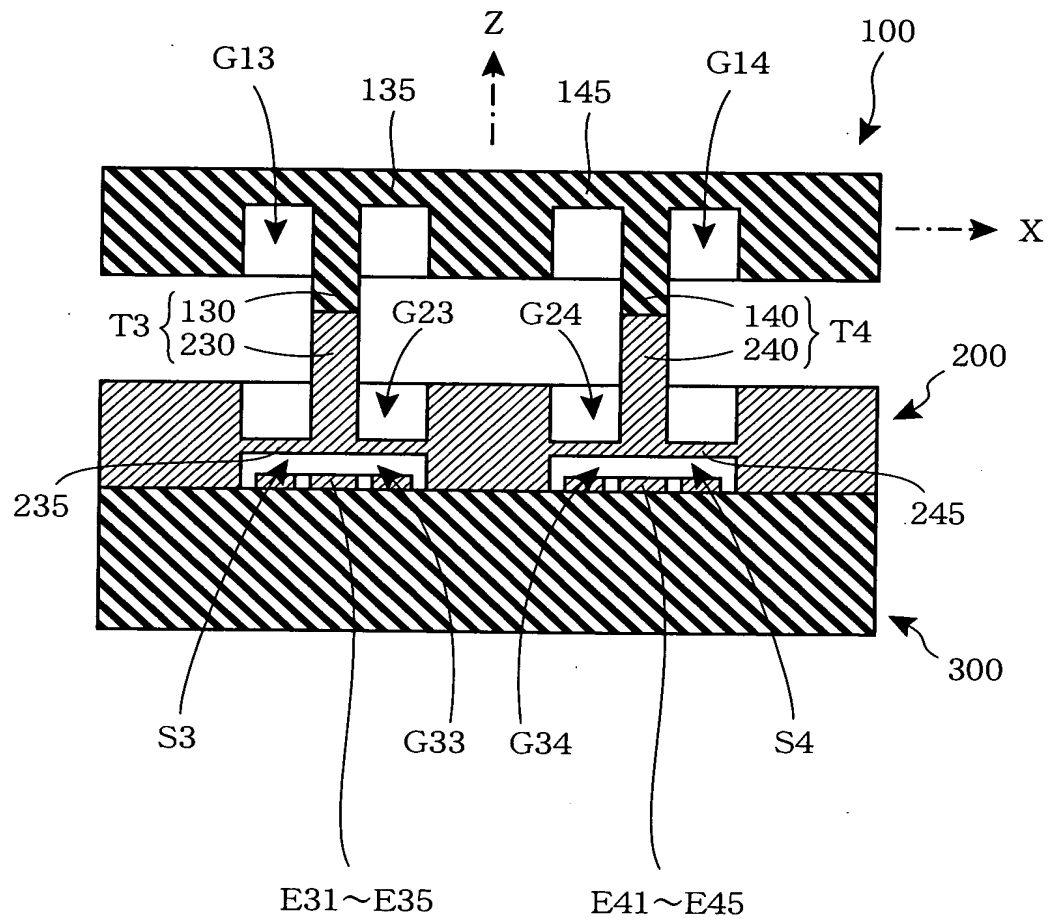
13/34

Fig.16



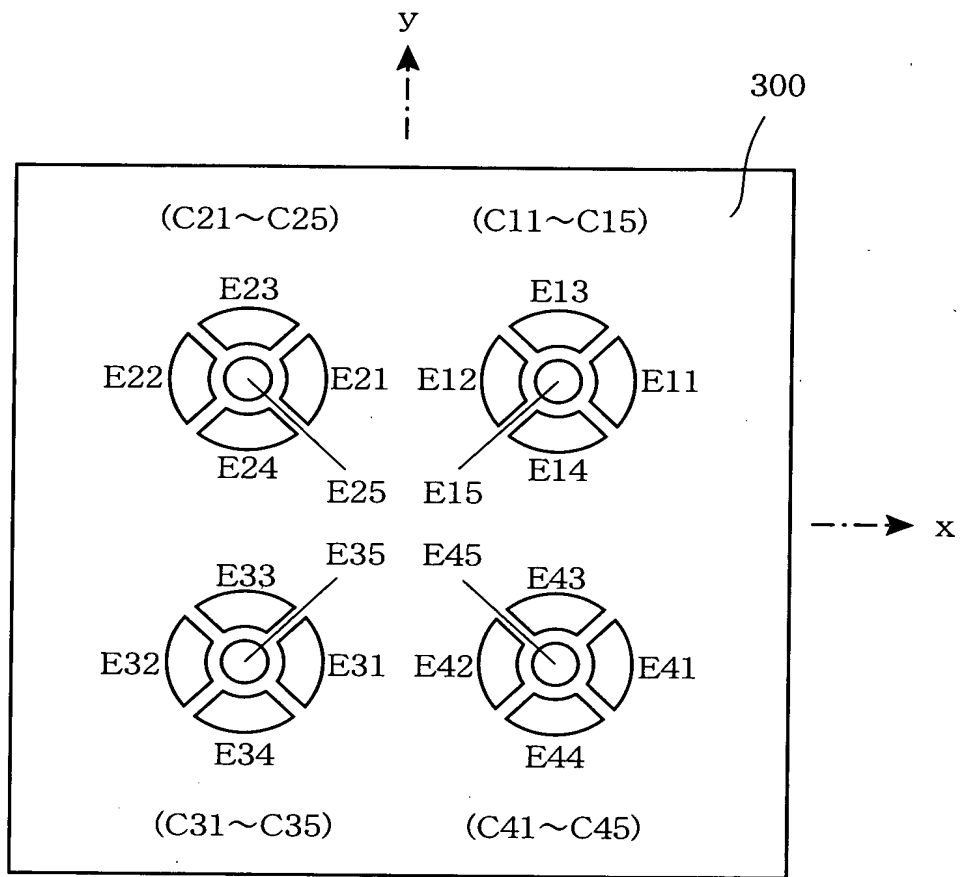
14/34

Fig.17



15/34

Fig.18



16/34

	C11	C12	C13	C14	C15	C21	C22	C23	C24	C25
+Fx	+	-	0	0	0	+	-	0	0	0
+Fy	0	0	+	-	0	0	0	+	-	0
+Fz	-	-	-	-	-	-	-	-	-	-
+Mx	-	-	-	-	-	-	-	-	-	-
+My	+	+	+	+	+	-	-	-	-	-
+Mz	-	+	+	-	0	-	+	-	+	0

Fig.19A

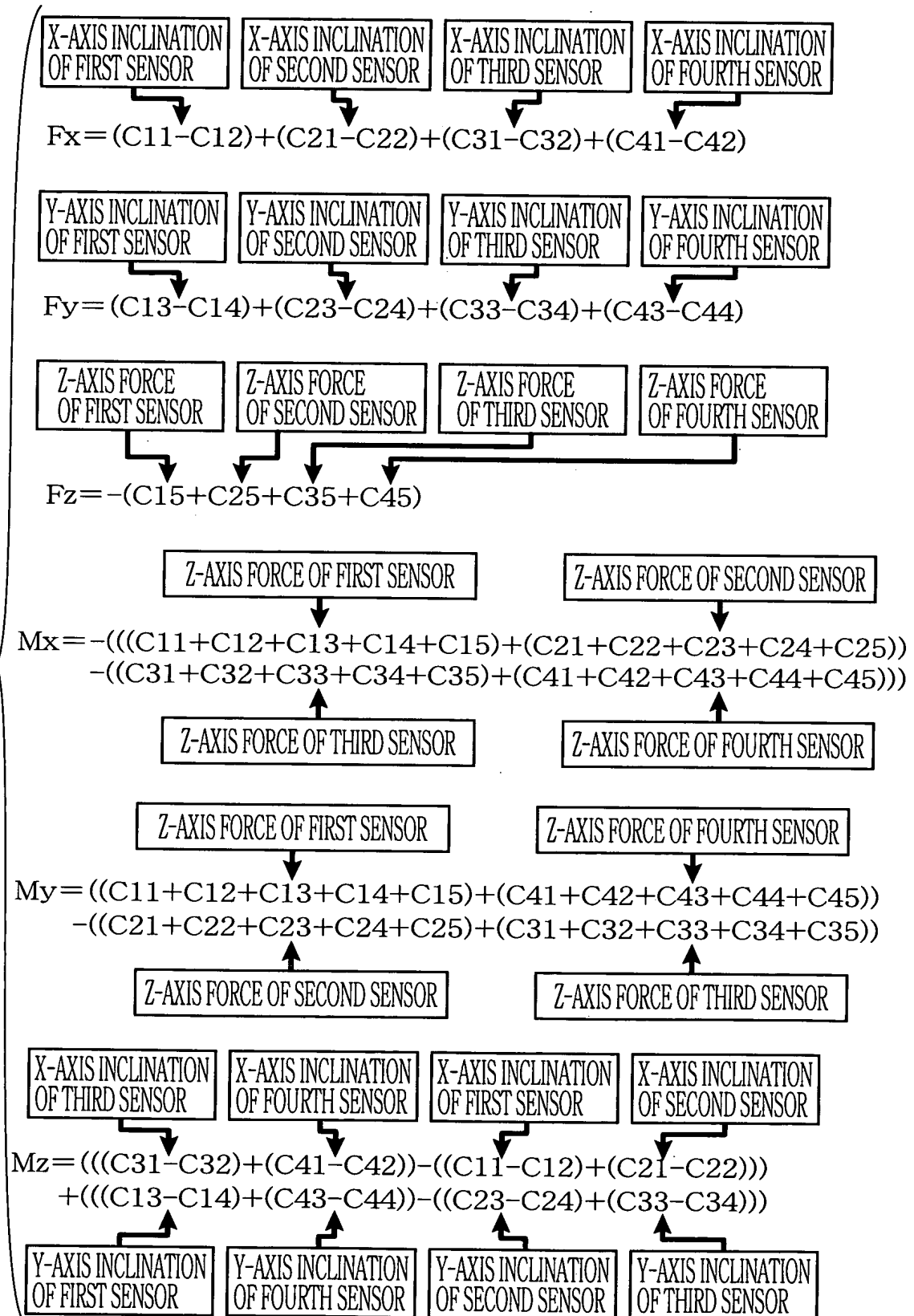
	C31	C32	C33	C34	C35	C41	C42	C43	C44	C45
+Fx	+	-	0	0	0	+	-	0	0	0
+Fy	0	0	+	-	0	0	0	+	-	0
+Fz	-	-	-	-	-	-	-	-	-	-
+Mx	+	+	+	+	+	+	+	+	+	+
+My	-	-	-	-	-	+	+	+	+	+
+Mz	+	-	-	+	0	+	-	+	-	0

Fig.19B



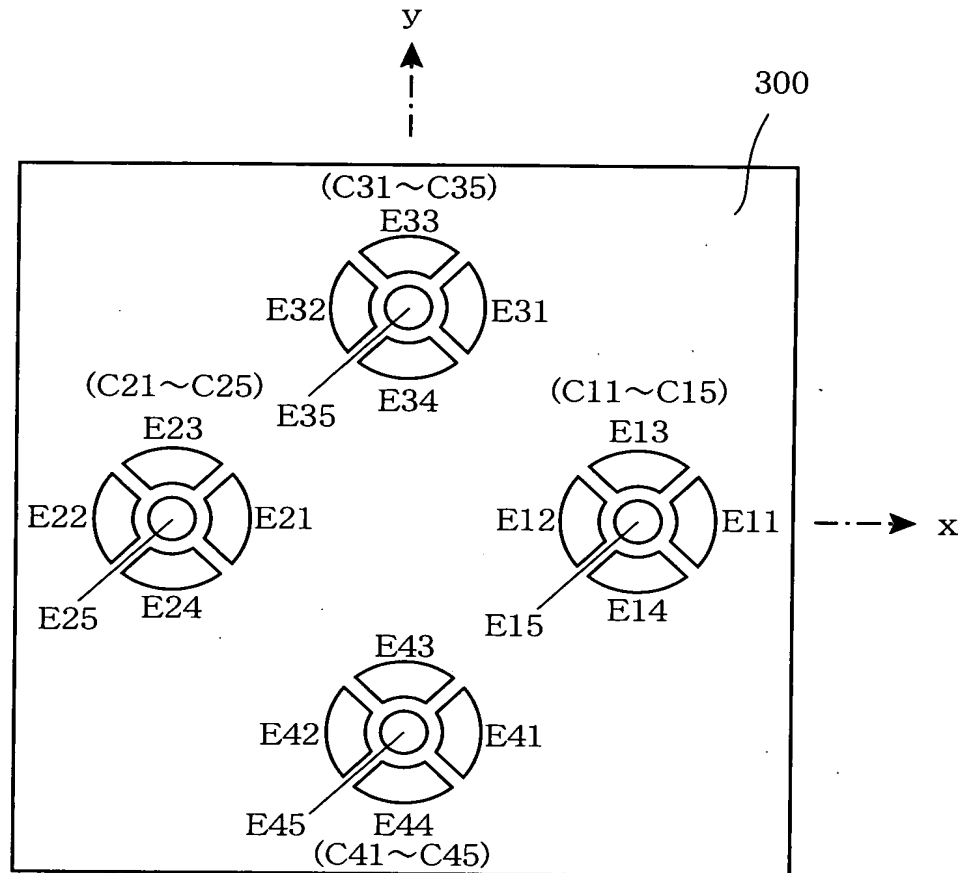
17/34

Fig.20



18/34

Fig.21



19/34

	C11	C12	C13	C14	C15	C21	C22	C23	C24	C25
+Fx	+	-	0	0	0	+	-	0	0	0
+Fy	0	0	+	-	0	0	0	+	-	0
+Fz	-	-	-	-	-	-	-	-	-	-
+Mx	0	0	0	0	0	0	0	0	0	0
+My	+	+	+	+	+	-	-	-	-	-
+Mz	0	0	+	-	0	0	0	-	+	0

Fig.22A

	C31	C32	C33	C34	C35	C41	C42	C43	C44	C45
+Fx	+	-	0	0	0	+	-	0	0	0
+Fy	0	0	+	-	0	0	0	+	-	0
+Fz	-	-	-	-	-	-	-	-	-	-
+Mx	-	-	-	-	-	+	+	+	+	+
+My	0	0	0	0	0	0	0	0	0	0
+Mz	-	+	0	0	0	+	-	0	0	0

Fig.22B

20/34

Fig.23

X-AXIS INCLINATION  
OF FIRST SENSOR    X-AXIS INCLINATION  
OF SECOND SENSOR    X-AXIS INCLINATION  
OF THIRD SENSOR    X-AXIS INCLINATION  
OF FOURTH SENSOR

$$F_x = (C_{11} - C_{12}) + (C_{21} - C_{22}) + (C_{31} - C_{32}) + (C_{41} - C_{42})$$

Y-AXIS INCLINATION  
OF FIRST SENSOR    Y-AXIS INCLINATION  
OF SECOND SENSOR    Y-AXIS INCLINATION  
OF THIRD SENSOR    Y-AXIS INCLINATION  
OF FOURTH SENSOR

$$F_y = (C_{13} - C_{14}) + (C_{23} - C_{24}) + (C_{33} - C_{34}) + (C_{43} - C_{44})$$

Z-AXIS FORCE  
OF FIRST SENSOR    Z-AXIS FORCE  
OF SECOND SENSOR    Z-AXIS FORCE  
OF THIRD SENSOR    Z-AXIS FORCE  
OF FOURTH SENSOR

$$F_z = -(C_{15} + C_{25} + C_{35} + C_{45})$$

Z-AXIS FORCE OF FOURTH SENSOR

Z-AXIS FORCE OF THIRD SENSOR

$$M_x = (C_{41} + C_{42} + C_{43} + C_{44} + C_{45}) - (C_{31} + C_{32} + C_{33} + C_{34} + C_{35})$$

Z-AXIS FORCE OF FIRST SENSOR

Z-AXIS FORCE OF SECOND SENSOR

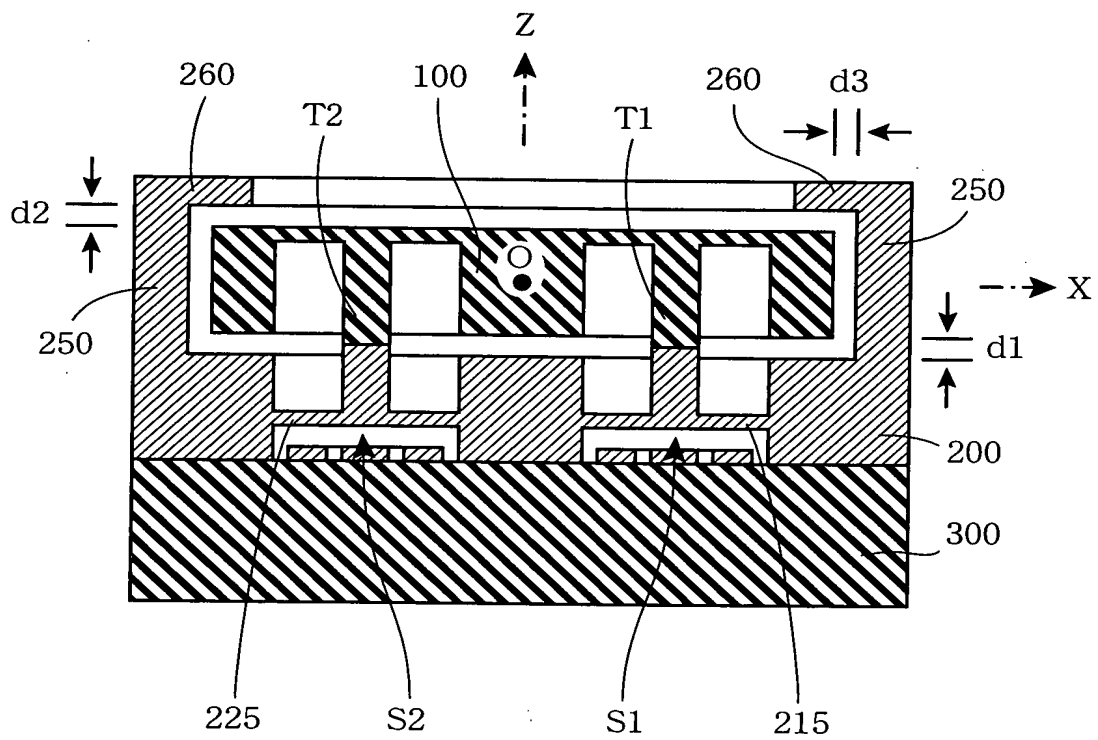
$$M_y = (C_{11} + C_{12} + C_{13} + C_{14} + C_{15}) - (C_{21} + C_{22} + C_{23} + C_{24} + C_{25})$$

Y-AXIS INCLINATION  
OF FIRST SENSOR    X-AXIS INCLINATION  
OF FOURTH SENSOR    Y-AXIS INCLINATION  
OF SECOND SENSOR    X-AXIS INCLINATION  
OF THIRD SENSOR

$$M_z = ((C_{13} - C_{14}) + (C_{41} - C_{42})) - ((C_{23} - C_{24}) + (C_{31} - C_{32}))$$

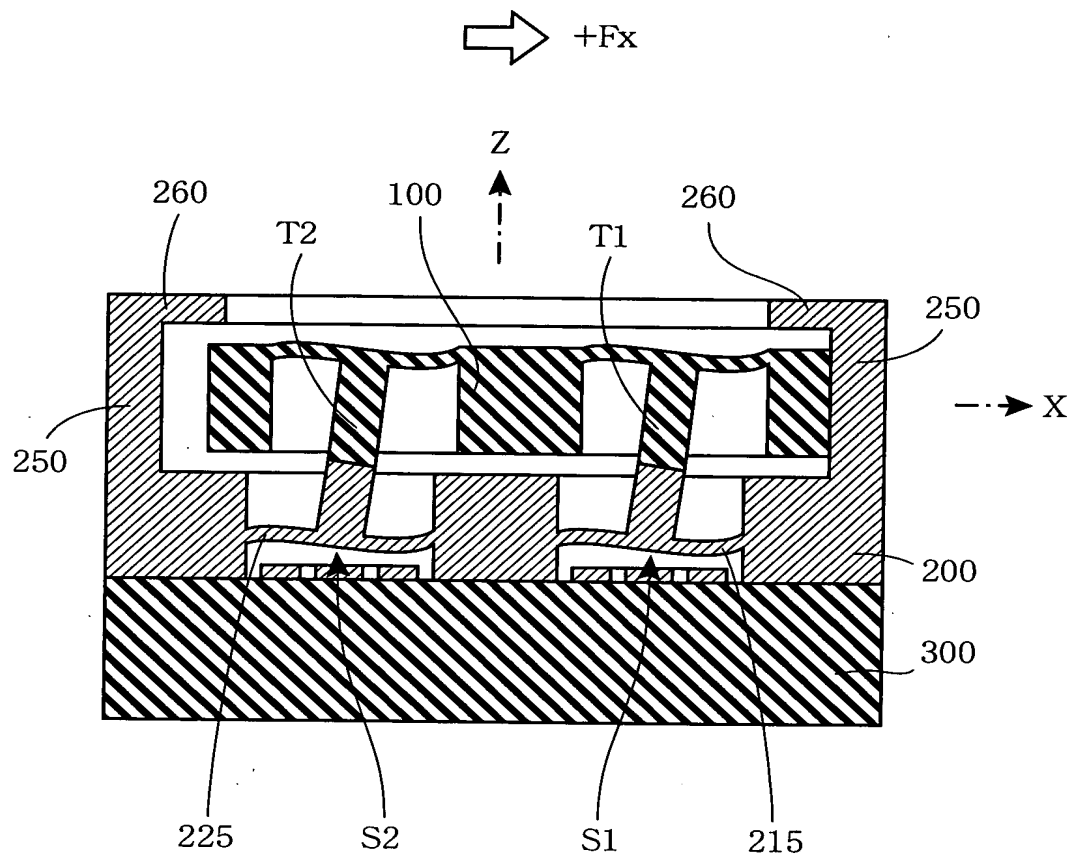
21/34

Fig.24



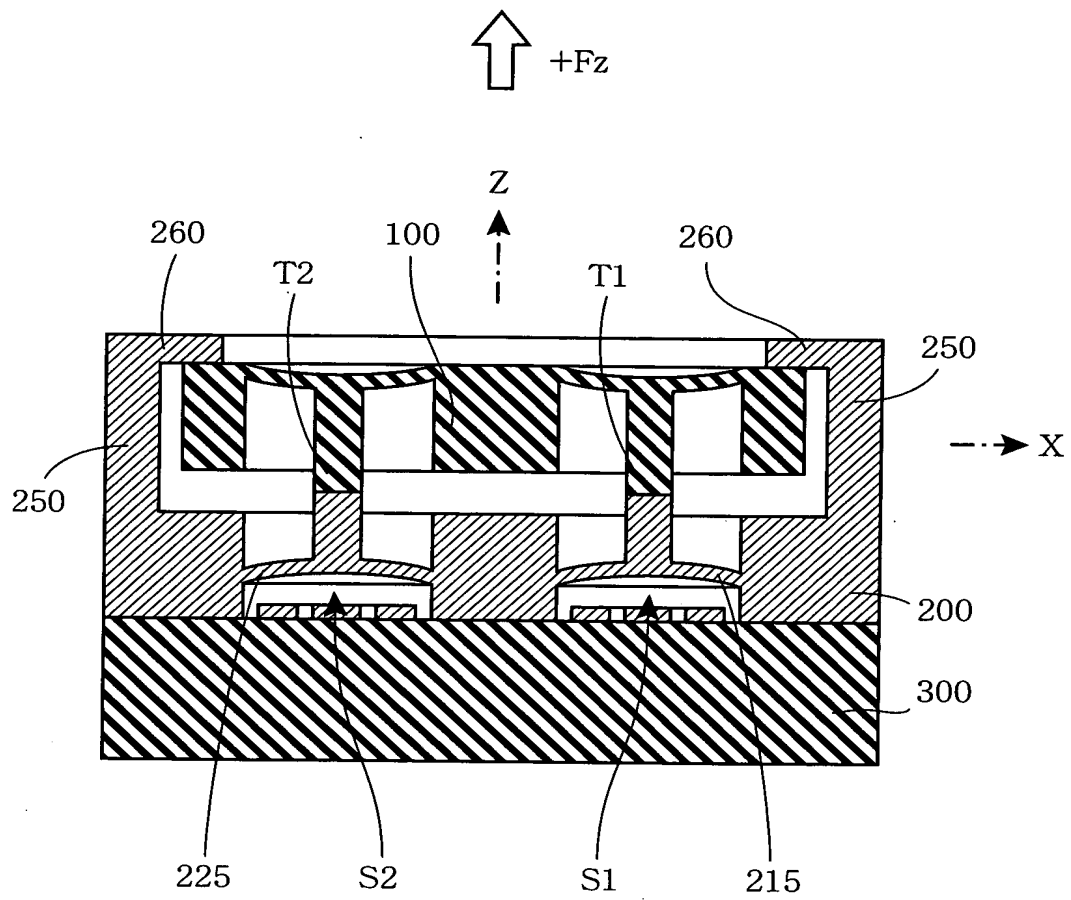
22/34

Fig.25



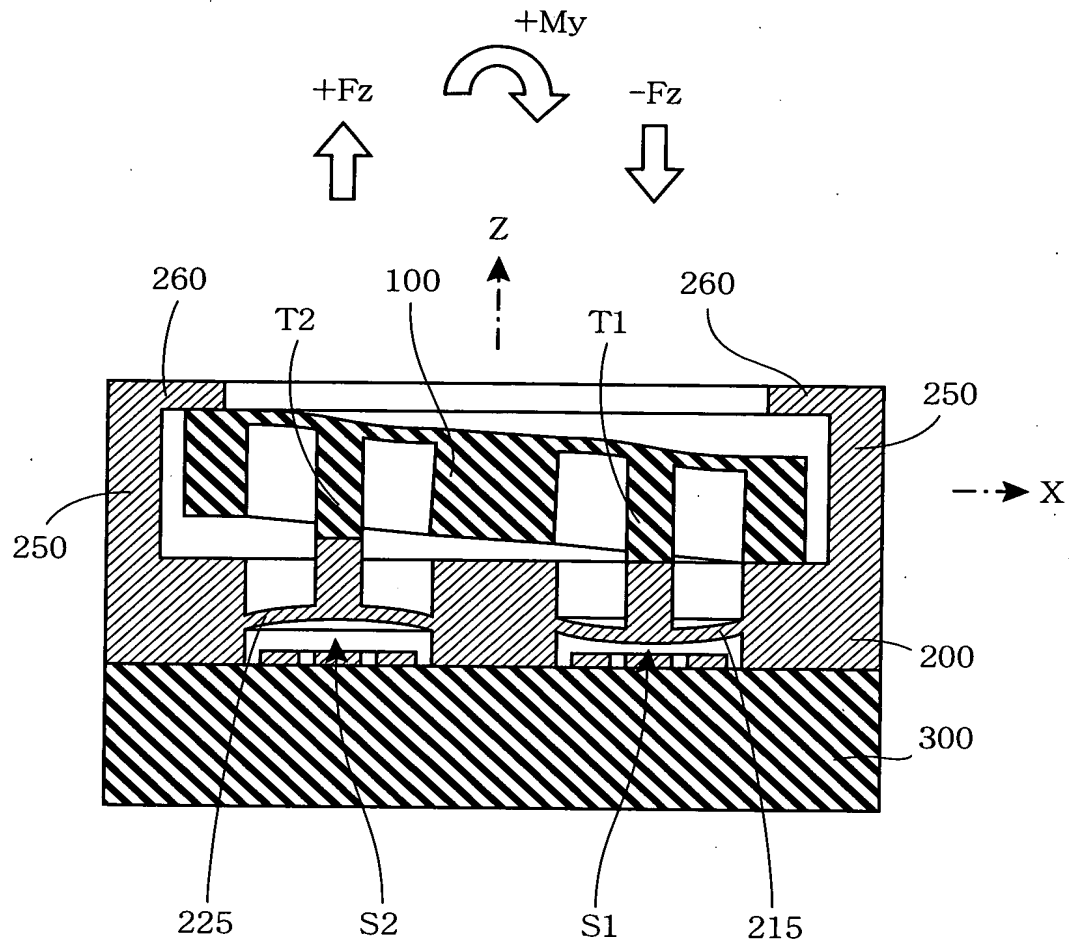
23/34

Fig.26



24/34

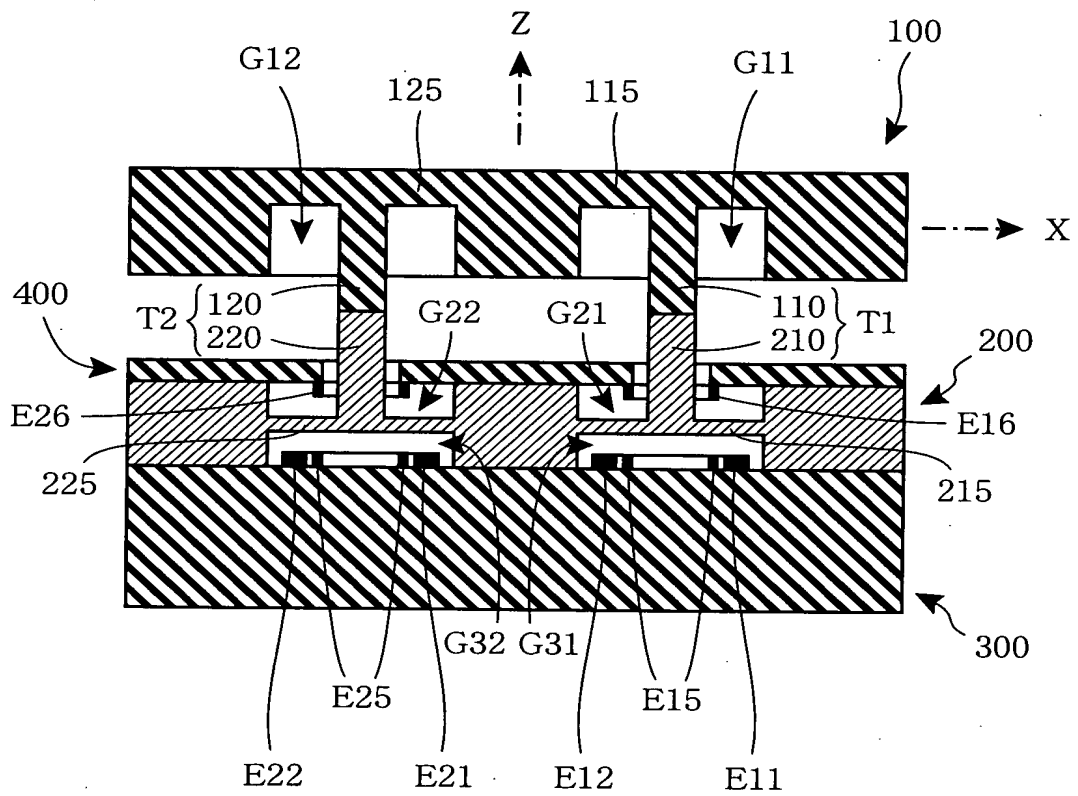
Fig.27





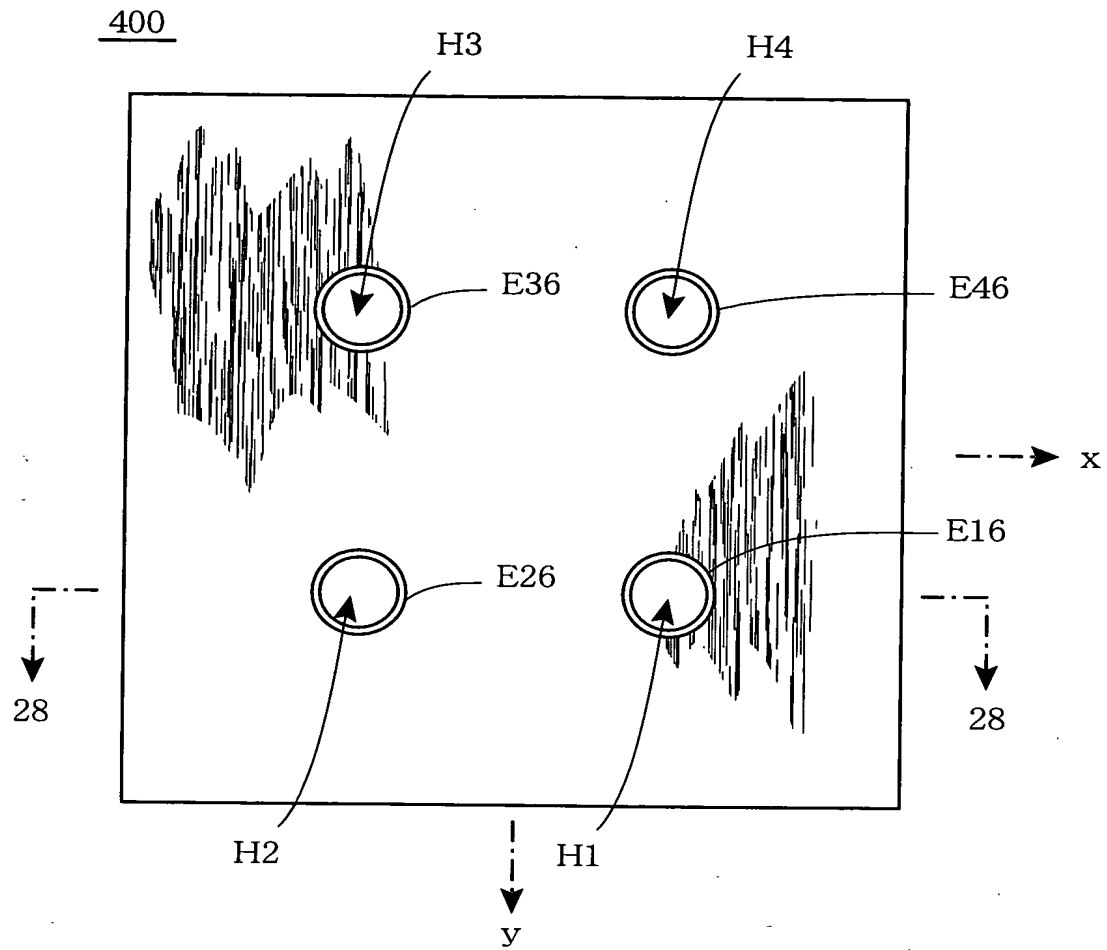
25/34

Fig.28



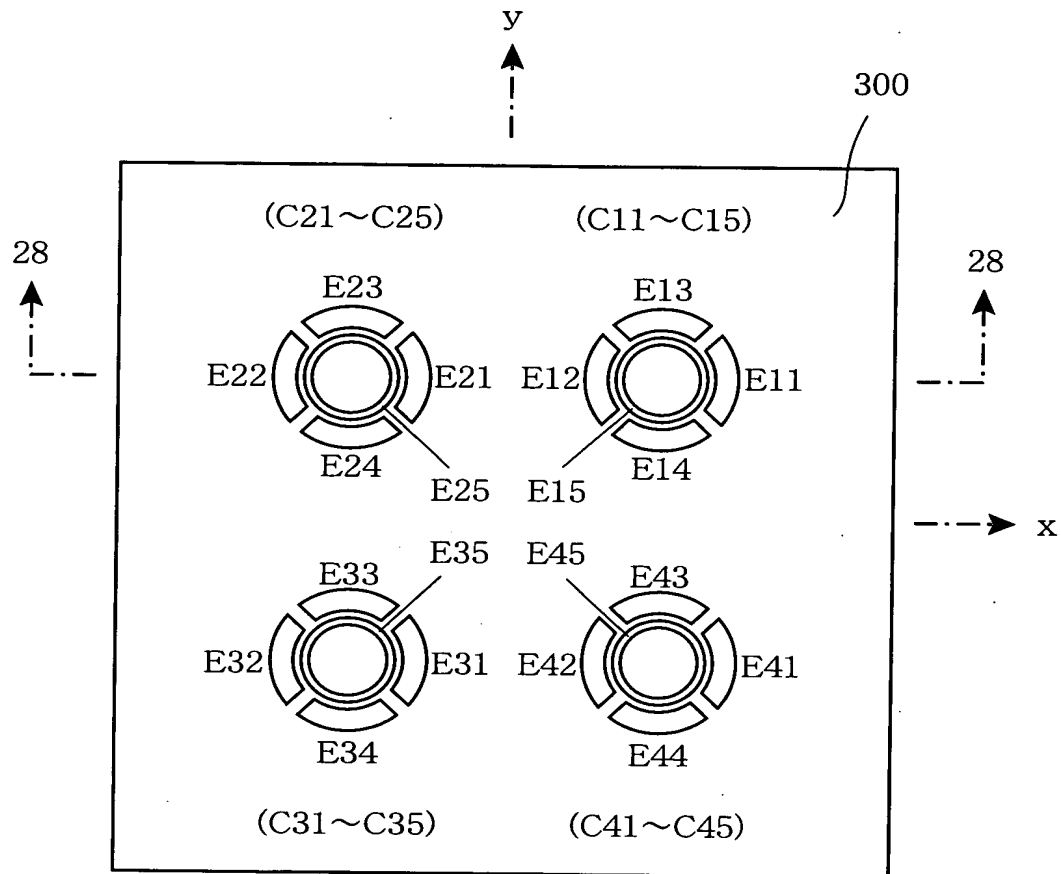
26/34

Fig.29



27/34

Fig.30



28/34

Fig.31

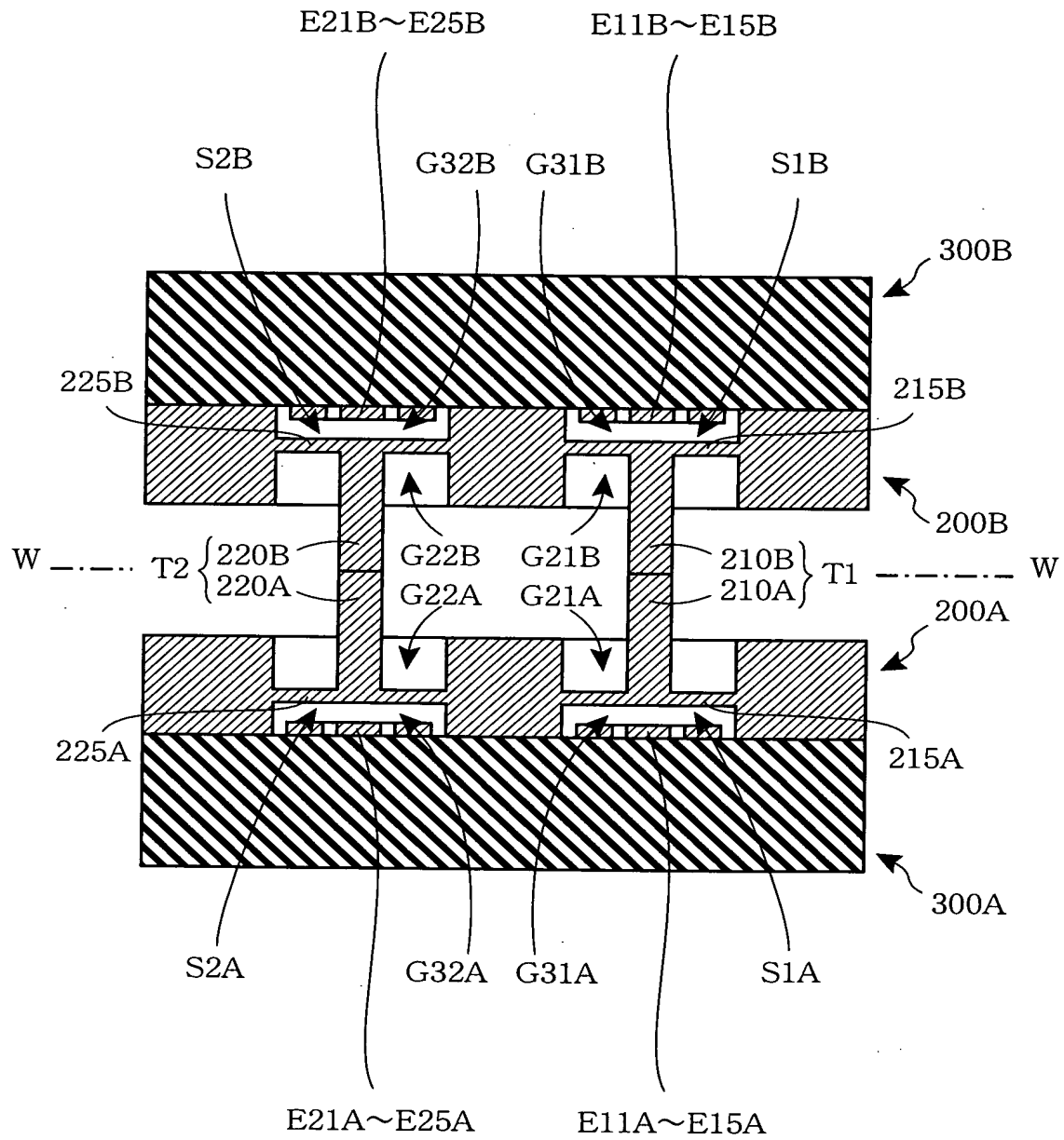


Fig.32

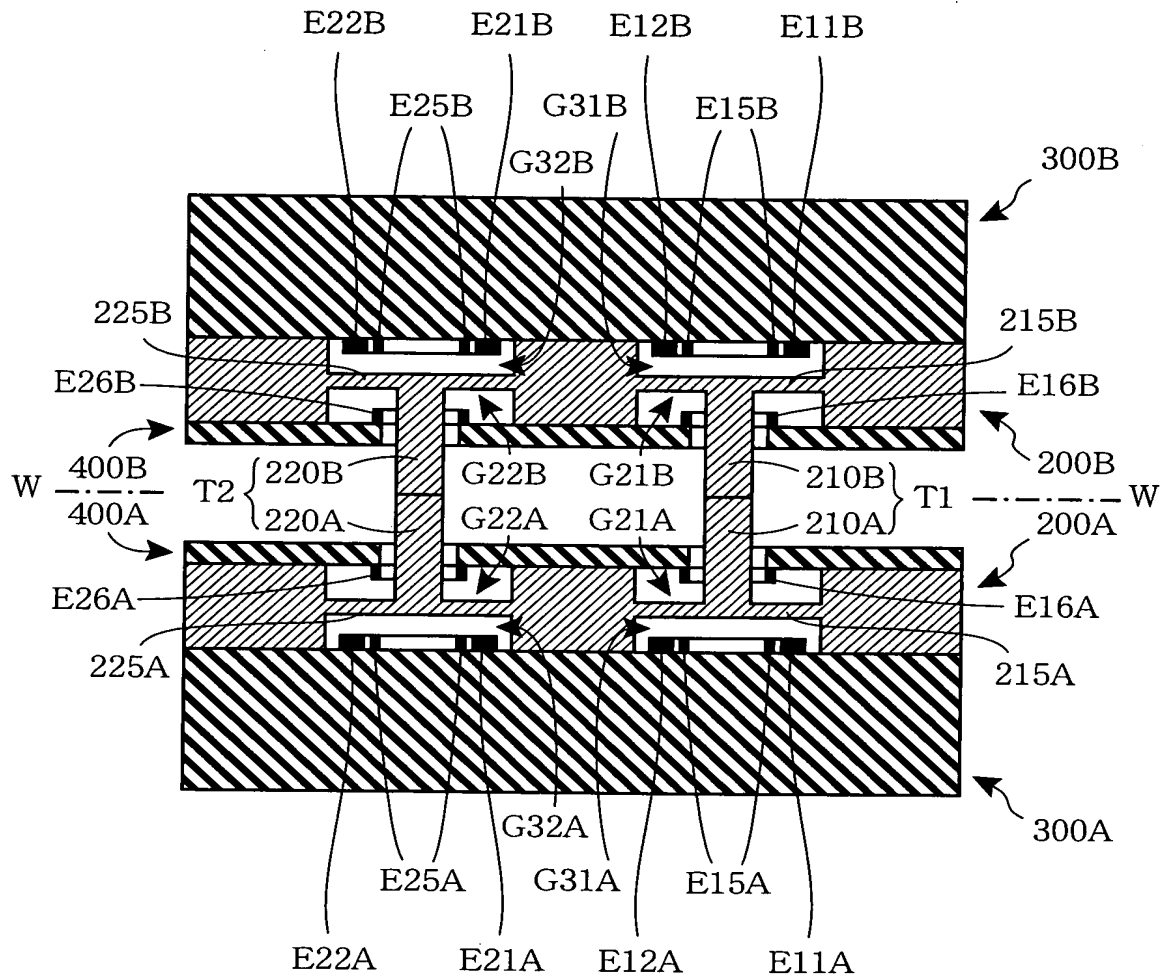
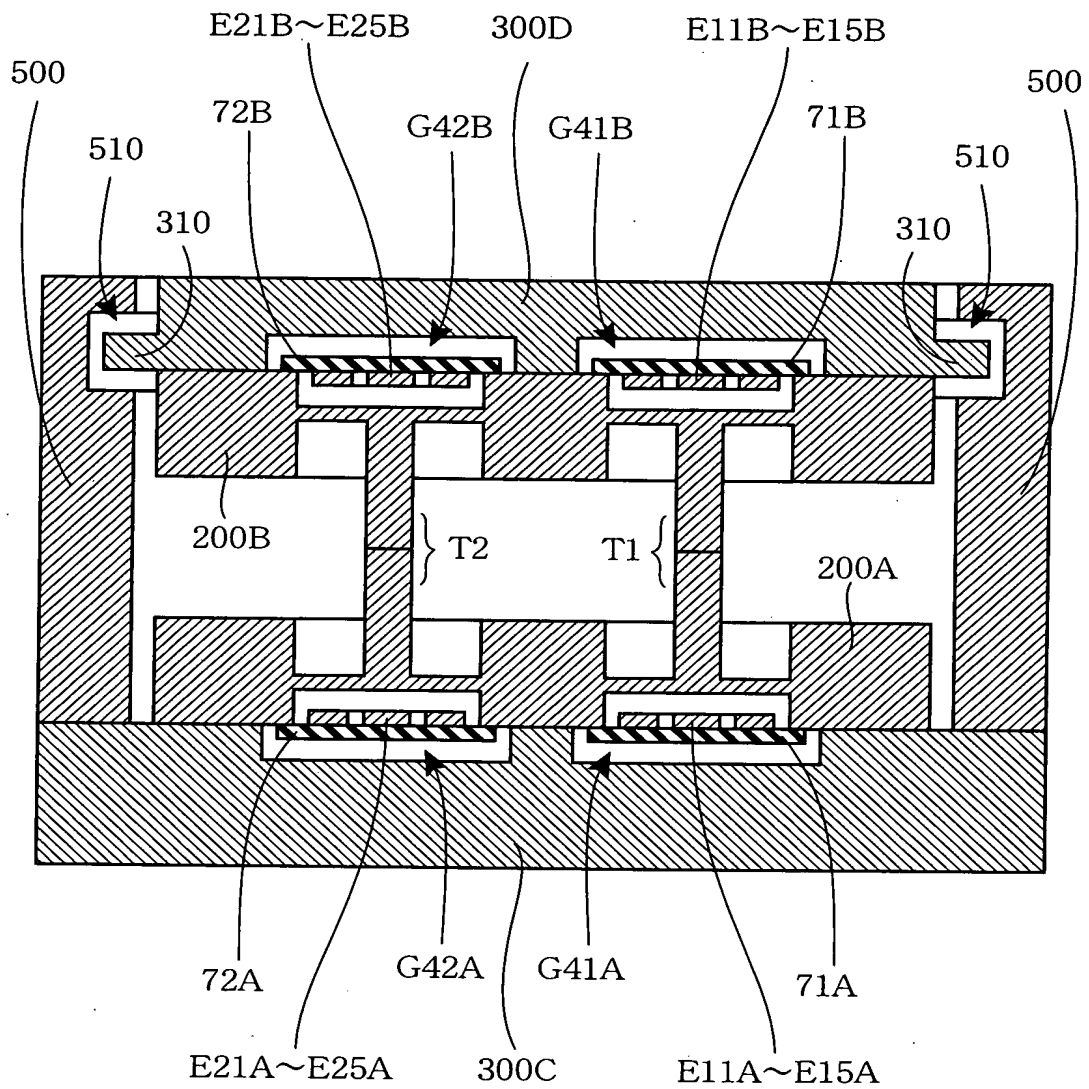
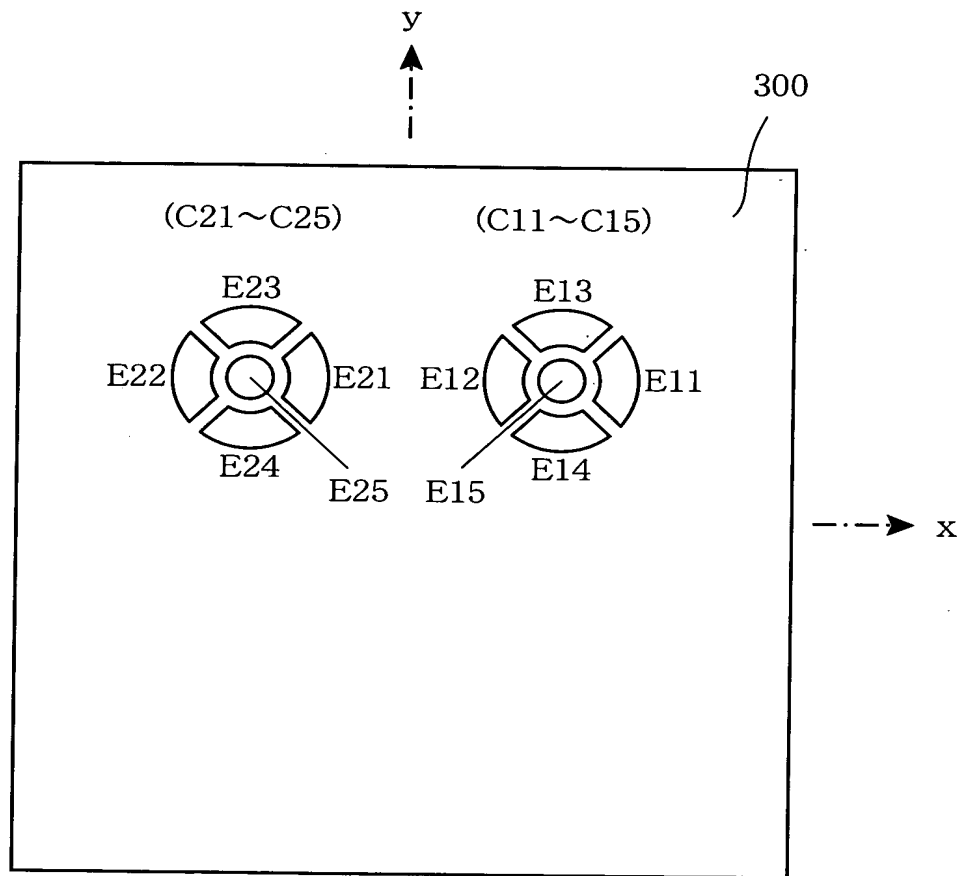


Fig.33



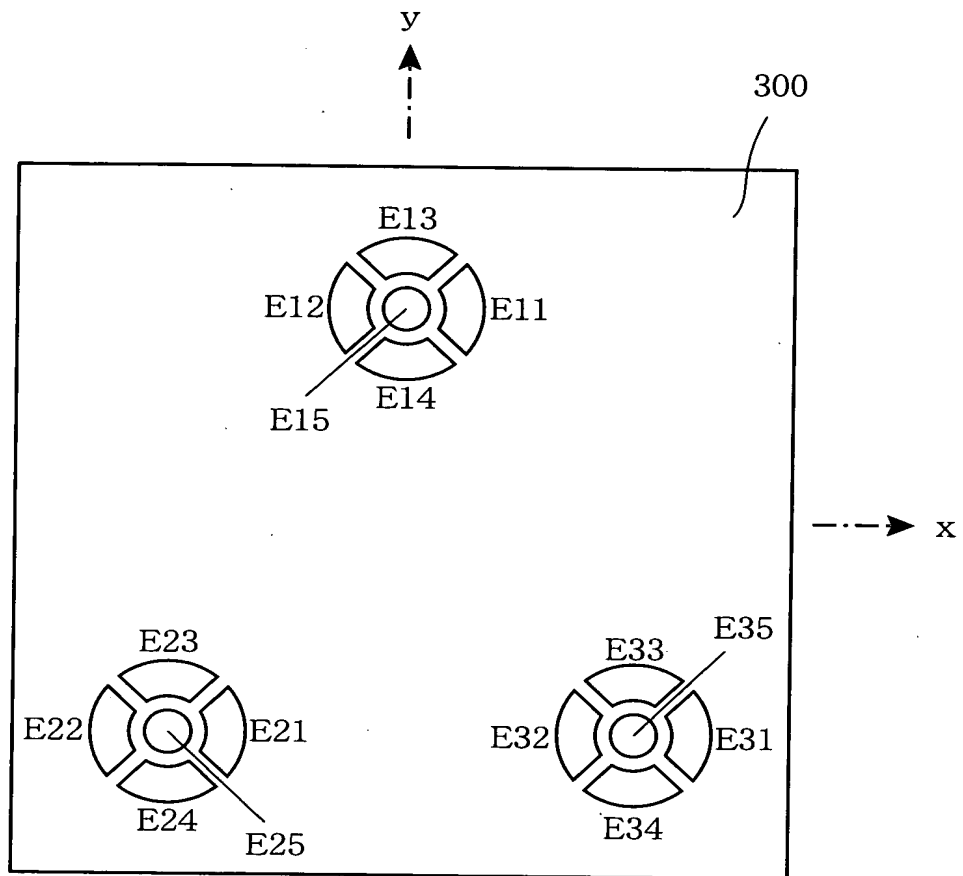
31/34

Fig.34



32/34

Fig.35





33/34

	C11	C12	C13	C14	C15
+Fx	+	-	0	0	0
+Fy	0	0	+	-	0
+Fz	-	-	-	-	-
+Mx	-	-	-	-	-
+My	0	0	0	0	0
+Mz	-	+	0	0	0

Fig.36A

	C21	C22	C23	C24	C25	C31	C32	C33	C34	C35
+Fx	+	-	0	0	0	+	-	0	0	0
+Fy	0	0	+	-	0	0	0	+	-	0
+Fz	-	-	-	-	-	-	-	-	-	-
+Mx	+	+	+	+	+	+	+	+	+	+
+My	-	-	-	-	-	+	+	+	+	+
+Mz	+	-	-	+	0	+	-	+	-	0

Fig.36B

34/34

Fig.37



$$F_x = (C_{11} - C_{12}) + (C_{21} - C_{22}) + (C_{31} - C_{32})$$



$$F_y = (C_{13} - C_{14}) + (C_{23} - C_{24}) + (C_{33} - C_{34})$$



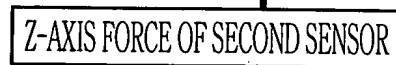
$$F_z = -(C_{15} + C_{25} + C_{35})$$



$$M_x = -((2 \times C_{15}) - (C_{25} + C_{35}))$$



$$M_y = (C_{35} - C_{25})$$



$$M_z = ((C_{21} - C_{22}) + (C_{31} - C_{32}) - 2 \times (C_{11} - C_{12})) + ((C_{33} - C_{34}) - (C_{23} - C_{24}))$$

